

Chapter Six

Infant and Toddler Oral Health



Good oral health practices in infants and toddlers are essential to meeting their general health needs. In Washington State, 11-12% of infants and toddlers, one to two years of age, have already experienced tooth decay. Untreated tooth decay in preschoolers can lead to problems of severe pain, dysfunction, and poor appearance. Recent assessments of children indicate that tooth decay begins very early and demonstrates that if healthy practices are begun early, tooth decay in infants and young children can be reduced or prevented.

This chapter includes information about oral health for infants and toddlers to help CCHCs as they work with child care providers. Much of the information in this chapter was adapted from the National Training Institute for Child Care Health Consultants, *Bright Futures*, and the *Child Care Health Handbook* (see Resources and References).

With respect to the promotion of proper oral health in child care, the CCHC should expect to see the following in every child care facility:

- A dentist of record for emergencies for every child in the facility by one year of age
- Provider awareness of the importance of good feeding practices, particularly that snacks and meals should be at specific times to allow the mouth pH to return to normal
- Dental screenings included as a part of all screening procedures (see Lift the Lip in Resources and References)
- A toothbrushing program including fluoride toothpaste, if appropriate, depending upon age and the number of hours in care
- Safety policies to prevent injuries and to identify procedures in a dental emergency

Oral Health Check List for Child Care

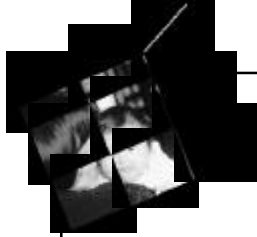
Tooth decay is an infectious disease, caused by bacteria (*Streptococcus mutans*) which can be transmitted from the mother to the infant. Mothers with good oral health reduce the risk of bacteria transferring to their infants. The decay process involves demineralization of the enamel due to acid from the bacteria. The normal pH of the healthy mouth helps protect the mouth and teeth. The pH of the mouth changes during eating. After eating, the mouth slowly returns to its normal pH balance. Frequent snacking creates a continual acidic environment in the mouth. This is especially harmful when children are allowed prolonged access to juices or pop.

Early Childhood Caries (ECC), formerly referred to as Baby Bottle Tooth Decay (BBTD), occurs when a child is allowed continual access to a bottle containing milk, formula, juice, soda pop, or any drink with sugar. When a infant is given a bottle for extended periods of time to encourage sleep, comfort, and/or to calm the child, the sugary drink creates pools of liquid in the child's mouth which become a breeding ground for bacteria that may result in dental caries.

Early Childhood Caries (ECC)

Early Childhood Caries (ECC) (continued)

If a child has ECC, the teeth will appear flat white, brown, or have yellow spots known as carious lesions. Some teeth may be partially broken. It is estimated that 5–10% of all children experience ECC.



Caregiver Tip

Avoiding Early Childhood Caries

- Avoid putting infants to bed with a bottle of formula, milk, juice, or other liquid except plain water.
- Introduce a cup by 7 months of age with juice, formula, or water.
- Stop bottle-feeding and offer liquids exclusively from a cup around 12 months.
- Avoid allowing a child to use a bottle or cup except during mealtimes or snacks.
- Give a cold, firm, safe teething object to chew to help with teething. A child's first tooth usually erupts around 6 months of age.
- Clean a baby's teeth daily with a clean washcloth or soft toothbrush. After age one, use a pea-sized amount of fluoride toothpaste for brushing.
- Provide a balanced diet low in sugar rich foods. Avoid providing infants with desserts.
- Ignore thumb sucking or pacifier use until after age four.
- Encourage parents to bring their child to a dentist for preventive advice at age one.
- Remember to follow good safety practices to prevent oral injuries.
- Every child over the age of one year should have a dentist of record.

Developmental Stages of Infants' Oral Health

The eruption of children's primary teeth begins between four and seven months of age, although it may occur later or earlier in some children. The development of a child's teeth, however, begins in utero. For this and other fetal health reasons, mothers should receive good prenatal care, eat well, and avoid using tobacco products and alcohol during pregnancy. Developing positive prenatal health behaviors will help insure that the child's teeth develop properly.

Primary teeth are important for eating, speaking, placement of permanent teeth, and appearance. The lower front teeth are usually the first to appear, followed by the upper front teeth. All primary teeth are in the mouth by 2–3 years of age.

Teething

Infants normally begin teething between four and six months of age. Their gums may be red and swollen during teething and may cause infants to be irritable, restless, and fussy. They may want to bite and chew because their gums are hurting. An increase in saliva flow is also common. To ease some of these symptoms, recommend a one-piece teething ring or pacifier for the child to suck on. Cold temperatures are soothing, so chilling the teething item increases its effectiveness. Do not recommend foods as teething items; these can decrease infants' appetites for nutritious food at meal times and can promote tooth decay. Remind parents and providers to not coat teething toys or pacifiers with any substance. High fevers are not associated with teething, therefore other health causes should be investigated.

Developmental Stages of Infants' Oral Health

continued

A child's primary teeth are very important. They help a child to eat, speak, and retain space for the permanent teeth that will begin to erupt at five or six years of age. It is important for children to develop good oral health habits from an early age, and you can help providers and parents begin this with the infants in their care.

Care of Teeth

Cleaning Teeth and Gums

Fluoride is the most important factor in preventing early childhood caries, cleanliness is an important preventive measure that can be incorporated into the daily activities of the child care program. Brushing with a tiny child-size toothbrush moistened with water or using a soft cloth to clean teeth should begin as soon as teeth erupt into the mouth.

At 12 months, begin using a pea-size amount of fluoride toothpaste once a day, after eating. The presence of fluoride helps remineralize the enamel. Fluoride supplementation should be recommended by a dental professional based on the fluoride content of the local water supply, the infant's risk for caries, and other familial considerations. Fluoride supplements are available in two forms with fluoride drops most commonly used for infants six months of age and older. Older toddlers may be given chewable tablets. Providers and families may need help accessing this care for infants. The CCHC can provide this help through education and information about getting fluoride prescriptions.

At about age three, children can begin to learn how to brush their own teeth with assistance. The consultant can talk with providers about how to use games, songs, and activities to teach toddlers this skill (see references) and incorporate tooth brushing into daily activities. Most children do not develop the dexterity to do an adequate job of brushing until they are about six or seven years old, but daily practice in the child care program can help develop these skills. Child care providers can help children practice brushing using a circular motion and establishing a pattern of brushing that includes all the surfaces of the teeth. Ideally, children should brush for about three minutes. Using a timing device that is either visual (like a sand timer) or audible may help keep children interested.

Parents and caregivers should be familiar with the normal appearance of the child's mouth. This will help in recognizing problems early. There are varying opinions about the timing for the first dental visit. The American Dental Association (ADA) and the American Academy of Pediatric Dentists (AAPD) recommend that a child have the first dental appointment within six months of the eruption of the first tooth and no later than 12 months of age.

Care of Teeth continued



Health Consultant Tip Toothbrushing in Child Care

If tooth brushing is done in the program, the CCHC should observe for the following procedures to prevent the spread of illness.

1. Label toothbrushes clearly with child's name or other type of identification.
2. Clean brushes with running water and allow them to air dry between use. Do not wash in the dishwasher.
3. Hang or store brushes separately so that cross contamination from bristles does not occur. If a toothbrush becomes contaminated, it should be discarded.
4. Assist child in cleaning teeth. Children this age are too young to do it alone.
5. Clean toothbrush holders on a routine basis, but avoid exposing brushes to any soap or other chemicals.
6. Replace brushes when bristles look worn (about every three to four months) or after a child's illness to prevent reinfection.

Thumbsucking

Non-nutritive sucking (sucking not associated with eating) is common in infants, but is often of concern to parents and providers. It can be helpful to remind caregivers that sucking a thumb or pacifier may help calm the infant and will not harm the teeth during infancy. Today's pacifiers are designed to promote correct oral growth and development. They are an excellent device to satisfy infants' desires to suck and yet not promote decay by using bottles. Remind providers that pacifiers should not be coated in any substance other than plain water to avoid increased risk of tooth decay. Many children substitute thumbs or fingers for pacifiers especially at bedtime. Before the age of four, sucking on thumbs, fingers, or pacifiers is not a concern, and intervention to stop this behavior is not appropriate.

Breaking the Bottle Habit

Once children have become attached to the bottle, it can be a difficult habit to break that will need consistency on the part of both the parent and the child care provider. Offer providers and parents the following suggestions for breaking the bottle habit:

1. Gradually dilute the liquid usually put in the nap time bottle until there is only water.
2. Put children to bed without a bottle by:
 - singing or playing music
 - giving a back rub
 - reading or telling a story
 - holding or rocking the child
 - using a musical mobile
 - other culturally appropriate interventions

Remind providers and parents that children may cry or fight giving up the bottle at bed or nap time, but this will only last a short time.

The CCHC should observe to determine and make recommendations about dental injury policies. Dental injury policies should consider all of the points in the caregiver tip on Dental Injuries.

Dental Injuries



Caregiver Tip Planning to Prevent Dental Injuries

Most dental injuries occur in children between one and two years of age. Infants and toddlers often fall and hurt their mouths. Some precautions can be taken to avoid injuries.

1. Provide safe toys, a safe environment, and supervise activities.
2. Use car seats correctly.
3. Install and use safety devices on cabinets, stairs, and windows.
4. Use proper cribs and mattresses.
5. Monitor all infants and toddlers when in high places, such as changing tables.
6. Use play equipment and toys properly.

Emergency dental numbers should be available for each infant as well as information about how families want providers to handle oral health emergencies. The following types of dental injuries need immediate attention:

- * knocked out teeth
- * teeth that are chipped, loosened, or pushed through gums
- * toothache
- * broken or dislocated jaw

Surveys indicate a higher rate of untreated dental caries in children with special needs. It is unfortunate that some have suggested that this is because oral health may have a lower priority in families where the child has other health needs or that dentists are less willing to see these children. Children with special health care needs often have unique and complex dental needs in addition to their other health needs. Complexity of need and lack of appropriate local care facilities can overwhelm both parents and dentists. The CCHC can help families and dental practitioners access care.

Oral Health for Children with Special Needs

Oral Health for Children with Special Needs

continued

Some or all of the following factors may need to be considered by parents and providers in meeting the oral health needs of children with special needs:

- Daily medications
- Modified diets
- Communication limitations
- Psychological obstacles
- Decreased saliva
- Difficulty cleaning teeth
- Variations in teeth and jaw structures

Access to Dental Care

Unfortunately, children, and especially those who most need oral health services, are the least likely to have dental coverage. Only one-fourth of all children under the age of eight have private dental insurance (National Center for Education in Maternal and Child Health, 1998). It's no surprise that a recent national study found that 66% of children between the ages of two and four years had not had a dental visit during the preceding year. Check in your community about the availability of oral health services through:

1. Medicaid/Healthy Kids Now
2. Children's Health Insurance Program (CHIP)
3. Community sponsored programs – community clinics, dental society, churches, dental schools, civic organizations

Incorporating this Chapter into Your Practice

- Check in your community about the availability of oral health care, including care for children with special health care needs.
- Learn to use the "Lift the Lip" screening technique from your dental health contact within the local health jurisdiction and train providers to use the technique (see Resources and References).
- Develop and implement trainings incorporating information about oral health for infants, oral disease prevention methods, and responses to oral health emergencies into daily child care routines.
- Offer guidance about oral health emergency procedures in child care settings.
- Always include dental screening in any screenings provided, taught or recommended. Establish a "dental home" for each child in care.
- Refer for care when there are oral health problems.
- Provide information brochures or educational handouts about ECC (early childhood caries also known as baby bottle tooth decay) to staff and have some for parents to take home.
- Support staff in efforts to put infants to bed without bottles.
- Develop and implement trainings for dental professionals about child care settings as a resource to promote oral health.
- Obtain copies of *Bright Futures* and *Bright Futures in Practice* (see Resources and References).
- Offer to supply toothbrushes to the site and include toothbrushes for infants and toddlers, with instruction on use.

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Oral Health Check List for Child Care

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Dental Injuries



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